

Remarks

Reconsideration and allowance of this application, as amended, are respectfully requested.

Claims 1 and 2 have been amended as required by the examiner in order to overcome each ground of rejection under 35 U.S.C. § 112, second paragraph. Claims 13 and 14 have been editorially amended for consistency with other claims. Claims 1, 2, 4-7, 9, 11, 13, and 14 remain pending in the application, with claim 7 withdrawn from consideration as being directed to a non-elected invention. Claims 1 and 7 are independent. The rejections are respectfully submitted to be obviated in view of the amendments and remarks presented herein. No new matter has been introduced through the foregoing amendments. Entry of each of the amendments is respectfully requested.

35 U.S.C. § 103(a) - Akasaka

Claims 1, 2, 4-6, 9, 11, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent No. 0 329 157 B1 to Akasaka.

The rejection of claims 1, 2, 4-6, 9, 11, 13, and 14 under § 103(a) is respectfully deemed to be obviated. For at least the following reasons, the disclosure of Akasaka would not have rendered obvious Applicants' presently claimed invention.

By way of review, claim 1 defines a process in which "the measured values or the information derived from the measured values

originat[es] only from measuring cycles that were recorded in another extrusion process *in which the deviations in the film thickness from the target value lay within an acceptable tolerance range.*" As explained at specification page 4/8, last paragraph, this process feature is advantageous, because "[i]n this manner the control unit can control the device for controlling the film thickness even at the start of the extrusion process in such a way that the thickness profile of the film exhibits the ideal path in the fastest way possible."

The disclosure of Akasaka fails to meet each feature of Applicants' presently claimed invention. The process that results from using Akasaka's controller is different from Applicants' presently claimed process. Akasaka discloses a film thickness controller for an extrusion molding apparatus and a corresponding sheet manufacturing apparatus (page 2, lines 1-2). Akasaka discloses a thickness gauge which is able to detect the thickness of the film at a position downstream of the flowing film (page 4, lines 37-42). A difference between the detected actual thickness values and a set thickness value is calculated by a control device (page 5, lines 6-11). The thickness gauge has a memory device (page 5, lines 12-13) for storing film data that are measured over the entire width of the film (page 5, line 2). Using *the actual and the stored values*, the control device generates control

commands for the heaters of the film die to control the temperature of the molten plastic and with it the film thickness.

Applicants' claimed process automatically controls the thickness of an extruded film (specification page 1, first paragraph). The process includes measuring the thickness values of the extruded film, providing statistical values of the film thickness taking into account measured values or information derived therefrom using a definite number of measuring cycles, and generating control commands to a device for controlling the film thickness (specification page 1, first paragraph).

Applicants' claimed process includes recording the measured values or information derived therefrom from other (i.e., previous) extrusion processes (specification page 4, fourth paragraph). During the start of a new extrusion process, a storage unit provides a computer with *only these previously measured values or information derived therefrom, which were recorded when the deviation in the film thickness from the target value lay within acceptable tolerances* (specification page 4, last paragraph).

Akasaka's thickness controller takes recorded thickness values into account, but these values are utilized only together with *actual* thickness values. Akasaka does not control the thickness of the extruded film by taking *only* values into account that were measured during a previous extrusion *in which the*

deviations in the film thickness from the target value lay within an acceptable tolerance range. See Applicants' claim 1.

The Office Action does not take into account that Akasaka does not address the problem of reducing the deviation in the thickness profile of the web *after starting the extrusion process*. Akasaka deals only with the problem of reducing deviation in the thickness profile during the normal production of the web. Therefore, a person skilled in the art would not look to the disclosure of Akasaka in order to solve the object of the instant invention.

Furthermore, in contrast to the interpretation offered in the Office Action (see page 5), the claim 1 phrase "another extrusion process" is not any extrusion process that only differs in time. Applicants disclose that the thickness is controlled after the start of the extrusion process. The phrase "start of the extrusion process," however, can mean that there has been an interruption in the extrusion. Therefore, during a time period before starting the extrusion process, there has been no extrusion process. During this interruption, the extrusion machine is not operating. Based on Applicants' understanding, however, Akasaka deals only with a running, uninterrupted extrusion process.

To be more precise, Akasaka teaches that only the values back to, for example, $t=t_{k-2}$ and $t=t_{k-3}$ are taken into account (see Akasaka page 14, numbered sections (4) and (6)), and page 11, equation (22)). And additionally, since the conditions at the

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start of the extrusion process are not mentioned, Akasaka does not teach which values are used. Since Akasaka discloses no values, they are, most likely, an initial value such as zero. The aforementioned situation, however, leads to a large thickness deviation at the beginning of the extrusion process -- and this is the problem that is solved by the instant invention. No solution to the problem is presented by Akasaka.

Because of the aforementioned differences, there is simply no teaching in Akasaka that would have led one to modify the reference in a way that would result in the embodiment of the invention defined by Applicants' instant claim 1.

Claims 2, 4-6, 9, 11, 13, and 14 are allowable because they depend, either directly or indirectly, from claim 1, and for the subject matter recited therein.

In view of the foregoing, this application is now in condition for allowance. If the examiner believes that an interview might expedite prosecution, the examiner is invited to contact the undersigned.

Respectfully submitted,

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